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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/379,945	08/24/1999	JEFFREY S. ANDERSON	1006-018/MMM	1979
67701	7590	04/05/2007	EXAMINER	
IPSOLOON, LLP (JRD) 111 SW COLUMBIA ST. SUITE 710 PORTLAND, OR 97201			MEI, XU	
			ART UNIT	PAPER NUMBER
			2615	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE		DELIVERY MODE	
3 MONTHS	04/05/2007		PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/379,945	ANDERSON, JEFFREY S.
	<b>Examiner</b>	<b>Art Unit</b>
	Xu Mei	2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 December 2006.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,2,5-11 and 14-19 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,5-11 and 14-19 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. This communication is responsive to the applicant's amendment dated 12/18/2006.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 5-11 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konno (US-5,305,388) in view of Brokaw (US-3,564,445).

Regarding Claim 1, Konno discloses a dynamic bass equalization circuit with a second or higher order active filter having a dynamically adjusted gain and frequency response that vary with the amplitude of the audio electrical signal (Col. 2, lines 1-42). Konno does not disclose an amplifier with a negative feedback path that includes a pair of opposed diodes. Brokaw discloses an amplifier that having a negative feedback path with a parallel pair of opposed diodes (D1 and D2 for Figs. 2 and 4) in order to perform proper signal biasing for the entire operating range of the driver-amplifier combination thus prevent distortion of the original signal (see col. 2, lines 11-41, for example). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the circuit of Konno by include a negative feedback

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path of opposed diodes for an amplifier in order to perform proper signal biasing and prevent signal distortion of the signal to improved accuracy.

Regarding Claim 2, Konno discloses a Sallen-Key high pass filter (Fig. 1).

Regarding Claim 11, Konno discloses a dynamic bass equalization circuit with a second or higher order Sallen-Key filter having a dynamically adjusted gain and frequency response that vary with the amplitude of the audio electrical signal (Fig. 1, Col. 2, lines 1-42). Konno does not disclose an amplifier with a negative feedback path that includes a pair of opposed diodes. Brokaw discloses an amplifier that having a negative feedback path with a parallel pair of opposed diodes (D1 and D2 for Figs. 2 and 4) in order to perform proper signal biasing for the entire operating range of the driver-amplifier combination thus prevent distortion of the original signal (see col. 2, lines 11-41, for example). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the circuit of Konno by include a negative feedback path of opposed diodes for an amplifier in order to perform proper signal biasing and prevent signal distortion of the signal to improved accuracy.

Regarding Claims 8 and 17, Konno further discloses a positive feedback path having a voltage divider that voltage divides a feedback voltage (Fig. 1).

Regarding Claims 9-10 and 18-19, Konno further discloses a bass equalized audio signal that is delivered to a sub-woofer driver or full-range speaker driver at output 12 (It is inherent that the audio signal will be delivered to a sub-woofer driver, i.e., for

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low frequency audio output; or a full-range speaker driver in order to drive a speaker for generating an audible output).

Regarding Claims 5 and 14, Brokaw further discloses resistor 22 in series with the parallel pair of opposed diodes.

Regarding Claims 6 and 15, Konno further discloses a positive feedback path having a voltage divider that voltage divides a feedback voltage (Fig. 1).

Regarding Claims 7 and 16, Brokaw further discloses resistor 22 in series with the parallel pair of opposed diodes.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xu Mei whose telephone number is 571-272-7523. The examiner can normally be reached on maxi flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Xu Mei  
Primary Examiner  
Art Unit 2615  
03/07/2007